

The DX Bulletin

• America's Oldest Weekly Amateur Radio Publication •

SPECIAL REPORT

Chad Harris VP2ML Editor

BOOK REVIEWS

The ARRL Operating Manual edited by Bob Halprin K1XA

The new ARRL Operating Manual is by far the largest and most complete book of its kind. A better name than Operating Manual might be Operating Handbook, as the new edition is the "Handbook" of on-the-air amateur radio, with hundreds of pages of reference material, as well as helpful hints on a wide variety of operating modes and frequencies.

This third edition, 1987 date, has almost 700 pages, and is more than an inch thick. Much of that bulk consists of hundreds of pages of operating reference material, much of interest to the DXer. A partial list of these includes:

- Latitude and longitude of cities and DXCC countries
- Beacons on 14100 kHz, 10 meters, and 6 meters
- Worldwide amateur allocations, including footnotes
- 160 meter allocations worldwide
- ARRL DXCC Countries list
- International callsign allocations
- USSR Oblasts
- KØOST ham outline maps of Oblasts, prefectures, Europe, Africa, South America, and more
- Applications for ARRL operating awards
- 3076 US counties
- Azimuthal equidistant maps from N5KR for 20 spots around the world
- Sunrise and sunset times in hundreds of places, for every 15 days
- Propagation charts at three different sunspot levels on various paths at four different times each year.

The book would be worth the \$15 price tag on the basis of these references alone, as it pulls together information occupying many inches of space on The DX Bulletin's bookshelf. But Editor Bob Halprin K1XA has also assembled an excellent collection of readable and knowledgeable amateurs to write about the many aspects of amateur radio operating.

DX by Bob Locher W9KNI

Of most interest to The DX Bulletin readers, well-known author Bob Locher W9KNI wrote the chapter on DX operating. Bob's enjoyable and enthusiastic style captures the thrill of DXing, while making many valuable lessons. As in his book, The Complete DX'er, Bob takes you along minute by minute through an operating session, sharing the joys and frustrations of DXing. He covers topics such as propagation, contests and DX, timing of calls, tuning techniques, and much more, all without preaching or lecturing.

The DX chapter also contains many sidebars on DX-related data and techniques, written by several prominent DXers, including John Kanode N4MM and Don Brickey W7OK. Among the charts, tables, and helpful hints are the 1985 Most Wanted Countries survey from The DX Bulletin, ARRL Incoming and Outgoing QSL bureaus and how to use them, How to be a QSL manager, DX operating practices, Low band DXing, with frequency allocations, and 160 and 80 meter allocations around the world. The DX reader will find many useful and interesting tidbits in this chapter.

Carl Henson WB4ZNH on DXpeditions

But the Operating Manual contains far more than just DX. Intrepid DXpeditioner Carl Henson WB4ZNH authored the chapter on DXpeditions. This reviewer, who has been on a few DXpeditions himself, found a wealth of valuable tips in this chapter. Carl recommends checking with the Center for Disease Control in Atlanta, for example, to get the latest health bulletins and advice for your destination. He covers rig and equipment selection, including a detailed description of how to fit a TH3 into a 38" box, to beat oversized baggage regulations.

Carl discusses visas, and the important point of having more than one passport to visit spots such as South Africa or Israel. [African countries usually deny admittance to anyone whose passport contains a South African entry stamp; hence the need for a second passport. -ed.] Even the non-DXpeditioner will welcome many of Carl's travel hints, such as ways around weight restrictions and numbers of bags allowed.

Among the best parts of the DXpedition chapter is the section on operating techniques. It should be must reading for anyone contemplating operating from the other end of a pileup. Carl covers how to control the pileup, intentional interference, tail-ending, and insurance contacts. He even mentions lists! Finally, the reference material in this chapter is mainly electrical plug specifications, and voltage, current, and phase data for spots all over the world. Want to know what plugs or which razor to take to Guinea-Bissau? You'll find the answer here.

Operating Awards by Bob Halprin K1XA

The book's editor choose the award chapter for his own direct contribution. The 56-page chapter covers hundreds of awards, from those offered by the ARRL to the Vanuatu Award. Data on each award includes start and ending dates, classes and requirements, award managers, endorsements, and fees. In what is probably a first in award descriptions, Bob includes dozens of color reproductions of many of the more popular awards. Even been disappointed by the poor quality of a new award? The award chapter of the Operating Manual lets you preview many colorful certificates. The New Zealand awards really stand out in this presentation.

The book covers other aspects of amateur radio, of course, including chapters on shortwave listening (a real plus with modern, general-coverage receivers), contesting, RTTY, packet, VHF/UHF, satellites, emergency communications, traffic handling, "image communications," and FM. A quick glance through these chapters reveals a wealth of valuable operating ideas and procedures.

There are a few minor flaws, of course. Devoting 35 pages to a computer duping program listing seems ridiculous; no one would attempt to type in such a program. And the index seems written by chapter, so that you have to first locate the major topic in which you are interested. You can find things faster by leafing through the appropriate chapter. And some things such as the 160 meter allocation chart don't appear in the index. But on the whole, the 1987 ARRL Operating Manual is a fine addition to the DXer's shack. Keep it within reach of the operating position; you'll refer to it frequently!

REVIEW

The Pavillion Software DX Programs

Dick Newell AK1A has developed a set of programs for the IBM PC computer to provide DX spotting functions and information exchange, via packet radio.

DX spotting via packet is the next step after VHF spotting nets. Nets and repeaters exhibit several inherent disadvantages: You must listen to them all the time, so you need stereo headphones, or very high volume to come over the audio of the low-band rig. This also means that you have to listen to all the non-DX business conducted over a typical VHF link. Second, it is easy to miss DX announcements, when you are out of the room, or in an intense pileup. Third, with spoken reports, errors often creep into callsigns, as P, B, C T, etc. sound the same through many repeater systems. Finally, there is no way to be selective about which calls you receive. If you are interested in only one band, you must sift through all the DX announcements on other bands.

A spotting net via packet radio eliminates these problems, and provides such additional features that enhance the value of the spotting network. First, the information appears on your computer screen, which allows you to see the data, without having to listen for calls. Second, the packet network automatically screens out all communication other than DX data. Third, you can't miss a call when you are out of the room or busy, as the packet network stores information for hours or even days. Fourth, the error-free nature of the packet system prevents callsigns errors (other than those generated by sloppy typing.) Fifth, you can be selective about your information. Do you want only 160 meter reports? Only ZA reports? You can view them and no others. Finally, the DX data can be relayed without error over considerable distances, thanks to digipeaters.

With all these advantages, it is no wonder someone took the time and trouble to modify standard packet software to improve DX spotting functions.

In regular packet, an operator must specify a given path through relays to make a 'connection.' Or the operator can "listen to" (watch?) all packets on the frequency, including re-trys, and all kinds of garbage. Fortunately, Pavillion Software gets around this limitation.

PacketCluster

The PacketCluster system requires at least one 'node,' or fully equipped station with dedicated packet equipment. An IBM PC XT or compatible clone, and a Kantronics KPC-2 TNC are necessary, as well as the VHF transceiver. However, the other stations in the network that connect to the node need only a minimal packet station. The PacketCluster system then provides DX spotting and announcements, user-to-user conversations, conferencing, and other features. Up to 26 stations can be connected to each node, and any number of nodes (fully equipped as above) can be linked together.

In operation, any connected station can type in a DX report for callsign and frequency, including comments such as listening frequency or QSL data. The system automatically adds the date, time, and callsign of the announcing station, and sends this data to every connected station, where it appears on the screen. It makes no difference to the individual user where the announcing stations is located, nor how the signal is repeated throughout the network; the data shows on the screen without additional commands.

You can also type SHOW/DX to see a list of previous DX announcements, very handy when you first turn on the rig. This feature can be "tuned" as precisely as you wish. For example, you can type

SHOW/DX20 and get the last 5 announcements on 20 meters. Or SHOW/DX/20 160 for the last 20 announcements on 160 meters. At any time, an operator can see who is connected to the network, and can talk to an individual station by typing TALK.

For contest operation, an EXCLUDE function allows single-operator stations to log announcements, but not receive them, so they can help the local club without jeopardizing their single-op status.

PacketCluster's latest version 2.0 contains a variety of other useful features. The system will make beam heading calculations, give sunrise and sunset times, make MUF calculations, and can store and announce WWV propagation data.

The Yankee Clipper Contest Club runs PacketCluster at several stations in New England during major contests, with considerable success. Between contests, the club runs a more traditional type of packet system, also from Pavillion software, called Packet Conference Board System, or PCBS.

Packet Conference Board System

PCBS includes regular mail functions, such as that found on most packet systems, as well as the same DX spotting functions described above. However, PCBS can only accommodate 26 users at one time, and cannot be connected to other nodes to increase the size of the network. For uses other than during major contests, this is not an important limitation. Version 3.0 of PCBS includes many of the same extra features as does PacketCluster: beam headings, sunrise/sunset times, MUF calculations, and WWV propagation data distribution.

PCBS can also be customized to fit particular needs. For example, Oblast chaser K1KI can type SHOW/OBLAST 111, and the PCBS will display all entries with that Oblast number. Other possibilities include SHOW/ROSTER, which can feature a list of club members, or SHOW/NEEDS for a club "want" list. If Macao comes on the air, a SHOW/NEEDS XX will list those club members needing Macao. They can then be alerted through a one-ring system, remembering that telephone numbers can be accessed through the SHOW/ROSTER function. Try that with your typical 2-meter DX repeater!

PCBS Version 3.0 is available from Pavillion Software, P. O. Box 803, Amherst NH 03031 for \$99.95 plus \$2 postage and handling. PacketCluster 2.0 costs \$69.95, plus \$2 postage. Either requires an IBC XT PC or clone, the Kantronics KPC-2, 2-meter rig and antenna. A DX club setting up a system from scratch would have to pay about \$1100-1200 for a dedicated node. The individual users could use any packet equipment, and their own computers would be free for other uses when not connected. The computer at the node would have to be available for full-time use in the system. PCBS, Packet Conference Board System, and PacketCluster are trademarks of Pavillion Software.

* Madison Electronics Specials for TDXB Readers

* Coaxial Cable:

Belden 9913	\$0.42/foot
Belden 8214 RG8 Foam	0.39/foot
Belden 8267 RG213	0.49/foot
(100 foot multiples only)	

* Connectors

Amphenol PL259-831SP	\$1.00 each
Amphenol 8261 N Male	3.00 each
Fox 9913 Type-N Male	3.00 each

* KLM Products: Cost + 10%

* Contact Don Busick at Madison Electronics,
* 3621 Fannin, Houston TX 77004 (713) 520-7300

AWARDS

The DX Awards Hunter
Ted Melinosky K1BV

Awards hunting is a natural outgrowth of the DX'ers activity. The QSL cards that are collected as a by-product of this pleasurable work can be put to use in this specialized part of our hobby. Perhaps you, like me, have saved just about every QSL since getting interested in this hobby. Then again, I know outstanding DXers who have few extra cards other than the 300 to 340 which gained them a place on the Honor Roll. Those of us in the former category will have an easier time of it in awards hunting. Even those in the latter group can at least qualify for about a dozen DXCC "look-alike" awards sponsored by the Societies of other countries.

But why awards hunting? Several reasons come to mind:

Awards provide a tangible goal, and one that is to some extent immediate (you have the needed cards) and others which form a long term goal (some are practically impossible!).

They are handsome - worthy of framing with multi-colored flags, emblems symbolic of the country. (Some are frankly dismal, but not too many are like this.)

They represent achievement - of a tangible kind. Who else in your club has an award from Vanuatu, or Bulgaria, or French Guiana?

You can learn some history when applying for awards.

I'll cover some of the fascinating ones, like the Danish Museum off WWII Occupation which uses authentic clandestine radios (OZ5MAY) or the award which commemorates the famed Russian Polar Explorer Ernst Krenkel (RAEM) - in future columns. You will learn more about geography too. If you get involved in the Worked All Britain Series, you will soon learn of the ITU squares system, the counties, shires, and islands of the UK. And unlike our US counties, many of the UK areas are unpopulated and require mobile/portable DXpeditions, in England! It's a fascinating part of our hobby, and I hope to act as your tour conductor in coming months.

Here is a sampler of one easy and one hard:

ECUADOR - Worked HC Award (WHC): Submit proof of contacting 5 of the 8 HC call areas since 1950. No charge. GCR list or photocopies of the cards to: Guayaquil Radio Club, PO Box 5757, Guayaquil, Ecuador, S.A.

NIGERIA - Worked All Nigeria Zones Award: Work one station from each of the 10 call areas of Nigeria, (5N0 to 5N9). GCR list if signed by official of applicant's national society. Contacts after 1 Oct 1980. Fee is 10 IRC's or \$4US. Apply to Award Manager, PO Box 2873, Lagos, Nigeria.

--- (Ted publishes the K1BV Directory of DX Awards)

And here are some additional awards from The DX Bulletin's mail:

OSIJEK AWARD: The Yugoslavian Clubstations from the city of OSIJEK will issue a special certificate to celebrate the 35th Anniversary of amateur radio in their city, Osijek. The award is available for amateurs or swl's from:

Europe: having contact with 5 different stations in the Osijek area.

DX: having contact with 3 different stations in the Osijek area.

Contacts with stations in Cepin, Dalj, Laslovo and Josipovac are considered to be in the Osijek area and also valid for the certificate. Fee 6 IRC's or US \$2.00 with a GCR list to: Kruno Feric, YU20M, Voj. B. Kidrica 102/12, 54000 Osijek, Yugoslavia.

COUNCIL OF EUROPE AWARD: The C.E.R.A.C. (Council of Europe Radio Amateur Club) has the great honor to inform you of the creation of the Council of Europe Award (C.E.A.), available to all licensed Amateur Radio Stations and SWL, following the conditions of this award.

Rules: Mode: SSB - CW - or MIXED (SSB-CW)

Second Class C.E.A.: 22 Contacts with the 21 member states of the Council of Europe and Official radio station of Council of Europe in Strasbourg - TP2CE on the following bands: 10m - 15m - 20m - 40m - and 80m.

First Class - 5 BAND C.E.A.: 22 Contacts with the 21 member states of the Council of Europe and Official amateur radio station of Council of Europe in Strasbourg - TP2CE on each of the following bands: 10m - 15m - 20m - 40m - and 80m, (110 Contacts).

The First Class - 5 bands C.E.A. will be honored by the signature of the Secretary General of the Council of Europe.

All contacts must be made after June 1, 1986.

All stations must be contacted from the same country.

All stations must be "land stations".

Contacts with ships, anchored or otherwise, and aircraft cannot be counted.

Send QSL cards and log sheet with the callsigns worked, dates, bands, and modes of contacts with the fee of US \$9.00 or 16 IRC's per award to: Award Manager, Francis Kremer, F6FQK, 31 Rue Louis Pasteur, F-67 490 Dettwiller, France.

Valid member states of the Council of Europe Award in 1987 are: CT-DL-EA-EI-F-G-HB0-HB9-I-LA-LX-OE-ON-OZ-PA-SM-SV-TA-TF-5B-9H and TP2CE

BRUNEI SCOUT AWARD: The amateur radio club PPNBD is issuing an award in order to commemorate ten years of participation in JAMBOREE ON THE AIR. The association will issue special award certificates to licenced amateurs who have established two-way radio contact:

1) DX-stations in CQ zone 28 need confirmed contact with ten (10) V85 stations and any two (2) of the club-stations, making a total of twelve (12) QSL cards.

2) DX-stations other than those in CQ zone 28 have to contact four (4) V85 stations and any two (2) of the club-stations, making a total of six (6) QSL cards.

3) SWL's need eighteen (18) V85 stations and any two (2) of the club-stations, making a total of twenty (20) QSL cards.

4) Contacts will be valid from October 17, 1987 through April 17, 1988. All bands and modes count.

To apply please send log extract (GCR) in alphabetical order by suffix, photocopies of QSL cards, along with a fee of five US dollars (US \$5.00) to : Awards Manager, P.O Box 2227, Bandar Seri Begawan, Negara, Brunei, Darussalam.

The Club Stations that will be active are:
V85BS B85BP V85JAM V85TS V85BSJ

The K1BV DX Awards Directory is available for \$14.35 postpaid, in the US (CT residents add sales tax.) DX: US\$13.75 surface mail or US\$16.75 airmail, from K1BV, 525 Foster Street, Suite 1001, South Windsor CT 06074.

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